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An Essay
on
Hepatitis.
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of Virginia.

Hepatitis, or Inflammation of the Liver.—

The liver, from its situation in the body, the peculiarity of its structure and organization, its immense utility when its functions are properly exercised, and duly performed on the human system, and the detrimental and ruinous influence it has on the same system when acted upon and disordered by the injurious effects of intoxication and intemperance, or prejudiced by disease from other causes; renders it at once an organ fit for practical observation and speculative inquiry.

The peculiar action, and secretion of this gland had long been an object of Consideration to the Physiologist, before its structure was so fully understood and developed by his laborious exertions, and the singularity of its Circulation is now a subject of great Curiosity and admiration.

When we recollect the wonderful effect of this secretion on the body at large, its Capability in hastening the Chylifaction of our food, and of increasing the

peristaltic motion of the alimentary canal, and the liability of its being conveyed through the system by the circulation; we are reminded of the great necessity we are under of avoiding those causes which can injure the secretion and render it unfit for the many useful purposes in which it may be employed—

But before we enter upon the consideration of the particular object of this essay, we may be allowed a general description of the viscus itself.

The Liver is a glandular viscus of a deep red colour, considerable in size and weight, placed in the right hypochondrium immediately approximating to the under surface of the diaphragm, and a small portion of it holding possession of a part of the epigastric region, "below, are the Omentum Minus, the Stomach, & the Transverse Arch of the Colon; behind, are the Vertebral Column and the Ascending Cava." The shape and figure of it is very irregular; on that surface which is next the diaphragm it is convex, and on that surface which is its opposite its is concave.— towards that side pla-

placed to the right side it is very thick, but wearing gradually thinner as it approaches the left. — has a thick round edge next the vertebrae on the right, but its sternal part terminates with an acute edge, its position is not horizontal, the dorsal margin being considerably more dependant than its anterior. It is divided unequally on its concave surface into two great portions called lobes, it is covered by a reflection of the peritoneum lining the cavity of the abdomen, and by doublings of the same membrane called ligaments, it is attached to the surrounding parts. — There are of these ligaments five in number, first, the right lateral ligament which joins the right lobe with the posterior portion of the diaphragm. — Second, the left lateral ligament which connects the left lobe and also the convex surface and margin, with the diaphragm. the round and coronary ligaments, — and likewise the broad or middle suspensory ligament passing to the convex surface and separating the liver into the two right and

left lobes, and moving to the concave surface is expan-
-ded and thrown over the whole gland. In this viscus,
as in all other parts of the animal machine we find
absorbents and nerves plentefully distributed through-
-out the whole.

The blood vessels of the liver arising from two dis-
-tinct and opposite sources, the one having its origin
from the venous, and the other from the ar-
terial Circulation, ramify with great diversity into
the minutest parts.

The Hepatic artery arising from the Coeliac enters
the liver at the great fissure together with the vena
portarum, at the point called portae, and likewise
where the hepatic duct passes out, - all of them enclo-
sed by peritoneal membrane called the capsule of
Glisson. It then devides into two branches, one dis-
-tributed to the right, and the other to the left
lobe. The chief use of this artery seems to be to give
nourishment and support to the gland itself
and not to be in any manner concerned in the

the secretion of the bile.

The Vena portarum, the great peculiarity of the liver, Originates from all the chylopoietic Viscera, but the liver, and is formed by the conjunction of all the veins corresponding to the branches of the Coeliac and Mesenteric arteries as they are disbursed to the Stomach, the Intestines, the spleen, the pancreas, and the omentum. Being thus formed it enters the liver with the hepatic artery as above described, and divergeng almost at right angles, throws itself in to the two different lobes of the liver; thence, after a plentiful Circulation it becomes mixed with the blood of the hepatic artery assembled with it in the venae cavae hepaticae, and conducted by these tubes to the vena cava: Thus formed, it resembles an artery in its office, and as some have supposed, in its structure; for it distributes the venous blood it has collected from the bowels, through the substance of the liver; and though it does not posess the principal discriminating mark of an

artery; "the power of preserving a circular orifice when transversely divided;" it has thicker coats than the other veins, and even some appearance of muscular fibres! It seems to be clearly an established fact that the blood brought hitherto the vena portarum, is brought here for the purpose of secretion only; but why venous blood should be conveyed to the liver for that especial purpose, and not arterial blood: or why the regulation of the animal Economy should be altered on account of this particular viscus, we are unable to comprehend: and therefore offer no opinion on so obscure a fact —

Concerning the substance of the liver it is now pretty well ascertained, though a variety of opinions have been entertained upon the subject, to be composed of an assemblage of small glands connected and linked together by cellular structure. When the internal substance of the liver is exposed to view and accurately examined, there appears to be small bodies or acini, otherwise called penicilli; formed

within it, to which the most minute ramifications of the vena portarum have access;—from a peculiar & specific action of these penicilli on the blood contained within them, that extraordinary liquor called bile is secreted, which is thrown into a receptacle or follicle, or thence taken up by the "pori billiarii" which joining and converging frequently together from the hepatic duct. It was held by the older anatomists that if the matter were secreted into a follicle, then the substance of the liver would be truly glandular; but if secreted directly into a small vessel, such as a billiary pore, then the substance was, in their opinion, vascular.— "But according to our notions of the present day, in either case the liver is said to be glandular; for we have the idea of a gland when any arrangement of vessels, performs the office of separating from the blood a fluid or substance in its nature different from the blood".

On the concave surface of the right lobe of the liver

we find attached a pear shaped receptacle called vesicular fellis or gall bladder; its junction being occasioned by a production of peritoneum reflected over it from the liver.

The Gall bladder appears to serve no other purpose in the human economy than that of a receptacle for the bile, though some have imagioned that the bile which it contains is secreted by it, or that there is a direct communication between its cavity and the substance of the liver, by what are called hepato cystic ducts. As however the gall bladder has nothing of a glandu=lar appearance, except in the mucus follicles attached to its Central membrane; and as the existence of hepato cystic ducts in the human subject has been completely disproved, we must infer that the gall bladder is merely a passive receptacle.— Saunders on the liver. Chapt 6th.

From the earliest times the ability and ingenu=ity of Authors have been exercised and practised, in order to discover the peculiar functions of the—

liver. They believe it to be the chief and supreme viscus of the body, the great director of the animal system; and that the fluids of nutrition were there concocted and converted into blood by its action. Its principal use is the secretion of the bile, which being conveyed to the intestines there performs some essential action on the food, and also excites the alimentary canal to a more proper fulfilment of its particular offices. The effects of the bile on the system appears to be more clearly marked in warm climates than in colder ones, its superfluous and overabundant secretion, and also its acrimony are the sources of many violent and dangerous diseases; dissipation, intemperence and imprudence, likewise conspire to be the cause of the injured action of the liver and its increased production of the bile — which being rendered thereby sometimes the primal, as well as the auxiliary cause of the inflammation, the scirrhosities, abscesses &c of the liver.

After this cursory explication of the liver and its func-

functions, we will now proceed so far as our slender ability will carry us with the aid of some little observation, to treat of inflammation generally.
The doctrines of inflammation are involved in so much obscurity and uncertainty, that nothing like an accurate knowledge of its phenomena has yet been discovered; or have we the most remote hope of being able to add any new light to them — but mean only to investigate given hypotheses...

Inflammation may arise from various remote and external causes acting as chemical agents, or from injuries directly applied, such as blows, contusions, or mechanical violence of any sort. Cold being a frequent cause, and fire or burning, executing its effect chemically; and likewise "extraneous substances lodged in any part of the body, irritating by their chemical acrimony or mechanical form or compressing by their bulk or gravity." Such being generally if not ~~always~~ universally the admitted remote causes of inflammation; — but that equanimity and agreement

has not existed with the illustrious Authors of Medical science, with regard to the proximate Cause of the pain. Numerous and various have been the opinions held and advocated by the different writers on the subject; diversified, strange and singular, have been their hypotheses; — and even at this stage of physical knowledge the Medical world seem to be divided among themselves into parties, and the learned of each to carry on the controversy with much earnestness and zeal.

Hoffman and Dr Cullen contended that the proximate cause was to be found in the increased action of the blood vessels. And the impetuosity and rapidity of the circulation, associated with a spasmodic stricture of the capillary extremities of the arterial vessels. But as from close and repeated observations it has been discovered that the small beginings of the veins appear in an overdistended state in the inflamed part as well as the small arteries themselves: it would seem to be fact, that

that no such spasmodic stricture or Spasm could exist. For if this spasm did exist in the end of the arterial Circulation, and the pass way between the arteries and veins blocked up which would be clearly the consequence if the spasm held in the capillary vessels, how then is it possible that there could be a replection in the commencement of the venous tubes, or in the venous Circulation generally.— Yet notwithstanding these reasons, the art, the ingenuity, the ability, and the earnestness of the writer, joined with his professions of good intention and kindness towards his fellow beings; seem almost to carry with them demonstration without doubt, and Conviction without opposition.

Another ingenious hypothesis (the Author of which is the celebrated Dr McBride) on the nature of inflammation, consists not only in the action of the blood vessel being greatly increased; but that the resistance to the Course of the Blood is removed or deminished. If the resistance or opposition in the course of the

blood be removed, and the obstruction from among action of the vessels no longer continue: equalization in the circulation of the part being the consequence of this removal, no injury could arise to the vessels, from this facility of passage or equality of motion. This hypothesis, then like the other must be abandoned by its advocates or it will ~~[illegible]~~ desert and forsake them.
The doctrine now held by many learned and eminent physicians of England and elsewhere seems to be, that inflammation consists simply in the increased action of the blood vessels, propelling forward a greater quantity of blood than usual into the part affected, thereby increasing its irritability and rendering it more acutely sensitive; its vessels being distended beyond their natural tone, and the circulation of the blood through them being stronger, and more powerful and rapid.—
This reasoning appears to us to be more fitty adapted to the general phenomena of fevers or even of-

Hemorrhage, than to the doctrines of inflammation. believed to be correct. — That theory of inflammation which appears to be the least objectionable, (and which is the direct contrary of those last mentioned,) is that state of the blood Vessels, consisting, instead of an increased impetus of the blood, in a deminished momentum of its volume.

This hypothesis is founded on the belief that there is a congestion in the Organization of the parts affected; and that something like a paralysis or an atony exists in the vessels, composing the inflamed part. For unless there be a deminished flow in the volume of the blood arising from some injury in the vessels affected, producing a stoppage in the current of the fluid, (as from some hinderance or obstruction in its Course) Congestion which is the necessary cause of inflammation could not take place. If there be an increased rapidity in the flow of the Circulating Mass, the bulk and volume of that mass must be ceasened. Its rapidity and celerity give indication of its ~~[illegible]~~

Shallowness, and that shallowness or diminution of volume together with its force and activity, eludes and dashes through, any thing like a "remora" or let, and in that continuance of the circulation there would necessarily be no congestion; (and of course no inflammation could arise) as congestion is supposed to be absolutely the constituent of inflammation

We have stated that congestion does doubtless exist in the inflamed part, and that it is actually the cause of inflammation: from experiment and observation with the microscope, it appears to be clearly demonstrable, that the movement of the blood in an inflamed part is seen to be preternaturally slow, and that in some instances the stagnation is so great that the flow of blood is scarcely perceptible, its character seeming to be changed almost entirely from arterial to venous blood.

If we observe the termination to which inflammation is liable, we are forcibly led to conclude that

the vessels concerned in the organization of the parts ~~affected~~ diseased, assume the secretary action of the glandular parts of the body, by which means they relieve themselves of the load of oppression with which they are burdened, (if not otherwise promptly relieved.) It is also clear that this glandular construction which the capillaries are forced to take on, could not perform its secretary office, (for sometime is required in the execution of that power necessary to coin from the blood a substance not originally belonging to it) did the blood pass with a quick, rapid and violent motion through this assemblage of vessels. The pain, heat, and tension which we find as constant symptoms attending a part said to be affected with inflammation, is another proof of a "remora", or obstruction choking and blocking up the passage for the blood in its vessels. For if the motion of the blood was rapid and celerous, no time would there be to cause pain, create heat and tension; which we hold to arise from an over-

fullness and distention, or from an injury inflicted on the affected vessels; the rapid & of course, easy flow of blood, its short stay in any particular portion of the vessel, would beget relief, rather than pain. Constantly discharging, and tarrying not long enough to produce disease.

What can we infer from the nature of the remote causes of inflammation, other than that which convinces us, that the powers of action in the part affected is by a great deal diminished rather than increased by their application. These causes are described to be cold, mechanical violence, and the contact of chemical irritants; these would not of themselves be powerful enough by mere application, to produce inflammation, — but an absolute injury of the part, severe contusion, thereby depriving the vessels of that energy of action necessary to the health and proper distribution of blood throughout the part; — and obviously diminishing their power

undoubtedly produce that congestion which is the proximate cause of all inflammatory action.
The signs by which inflammation is indicated & discovered are unusual redness, heat, and pain and tumour, the whole system likewise being somewhat disturbed; a continued and fixed pain in an internal portion of the body, united with pyrexia, and also the appearance of some interruption of the functions of the part, — point out the seat of internal inflammation and disorder. A preternatural glow and heat of skin, attended with great restlessness and uneasiness may also be ranked among the symptoms of inflammation.
The size and buffy appearance of the blood when drawn is also deemed an evidence of the inflammatory diathesis of the system at large. — but this seems to be a matter about which there is considerable doubt and difficulty, and therefore not much value should be given to it. — as its appearance seems to be as various as the variety of vessels into which it is

drawn. We do not mean to say that it is an indication never to be depended upon, as proof of an inflammatory tendency:— other than that, we would inculcate the belief that as a general rule it may be found to be correct;— yet to it there are many exceptions: 'tis no constant servant of the disease, no pathognomic Symptom, for it may frequently be seen attendant on other disorders.

Inflammatio Hepatis, an inflammation of the liver, by Dr Cullen placed as a genus of disease in the class pyrexia, and order phlegmasiae, and by him explained and defined to be a febrile affection attended with tension and pain of the right hypochondrium, often pungent, like that of pleurisy,— but more frequently dull or obtuse; a pain at the clavicle and at the top of the shoulder of the right side; much uneasiness in lying down on the left side; dificulty of breathing, dry cough, vomiting and hiccough,

We find in the application of cold, in the infliction

of external injuries from contusions, blows, bruises - the cause of inflammation in general; but these aside, hepatitis may arise from great fatigue and violent exertion; an exposure to intense summer heat, an injudicious and intemperate use of spirituous and vinous liquors, intermittent and remittent fevers: long and obstinately continued; and it is likewise sometimes occasioned by concretions of a solid nature, in the parenchyma of the liver. Expose the body, after extreme exercise and fatigue, to a cold, damp atmosphere, the perspiration being by it suppressed, the consequent effect will be, almost frequently, inflammation of the liver. The mind affected with much anxiety, disturbed by many fearful forebodings of the future, vacillating between hope and fear, extremely solicitous for certain events of magnitude; derangement in the organs of digestion and assimilation; the cessation of some secretion hitherto discharged, fevers, — lay frequently the seeds of obstruction and disease which attain to the liver.

This Viscus in warm climates seems to be the chief abode and seat of disease, - arising probably from an increased secretion of bile, produced by an unusual quantity of blood thrown upon the internal parts; by an exposure to Cold, or from some acrimony in the secretion itself, engendering an inflammation of the gland.
But in this temperate climate of ours the chief great causes of this malady are intoxication and intemperance. (both the curse and scourge of happiness in society, the torment and poison of our lives;) By a continual and unceasing course of dissipation and revel, the Constitution becomes worn down and distroyed. some of the different viscera of the body disorganised, and nearly eradicated, and none more readily and severely feels is dilapidating and ruinous influence, than the liver;- the proper execution of its functions becomes destroyed, its bile rendered too plentiful, and injuriously acrid - or its secretion not being sufficient to the healthy action of the alimentary canal: assimilation and nutrition having become disturbed and injured;- so that general disease will-

often be complicated with inflammation of the Liver. An artificial heat created in the body by an inveterate use of ardent liquors, supplies the place of a hot climate in the disorganization of the hepatic system; generating a disease nearly allied in both instances, by its symptoms as well as by its deteriorating consequences.
By some modern writers the Hepatitis of India and Europe is said to be widely different and dissimilar in its symptoms, and occasionally in its termination. A flux constantly attends the former as a pathognomic symptom, but is universally absent in the latter disease; that of Europe taking on active inflammation, soon coming to suppuration as a necessary effect, if not presently checked: the other assuming the form, rather of inflammatory congestion and obstruction; the sporadic hepatitis of this country, from the violence of the phlogistic symptoms being much greater, is consequently much more severe than that of India, more fatal in its effects, but not so frequent in its occurrence. The division of this inflammation is

generally into two kinds, one acute, exhibiting positive indications of perfect and genuine inflammation, and the other, chronic; the phlogistic symtoms being much less violent, with an induration and enlargement of the viscus and attended with dull pain. A violent pain in the right hypochondrium, sometimes dull, succeeded by a sense of chillness, with pain proceeding to the clavicle, thence to the point of the shoulder of the right side, increased by pressure, associated with dry cough and some dyspnoea, difficulty and inconvenience attendant on a recumbent posture, except that of the side affected; sickness, nausea, oftentimes accompanied with vomiting of bilious matter: great thirst, costiveness, hard and frequent pulse from 90 to 100 or 110 in a minute, with a hot and dry skin, the tongue at the same time covered with a furfuraceous stuff either of a white or yellow appearance: and after the disease has been for several days, some yellowness of countenance, the eyes seeming to be particularly affected with that change of colour,

The symptoms of the disease are not always so strongly marked as here delineated, but frequently much milder, so mild indeed that occasionally it may continue through life without the afflicted individual's being aware of the malady that preys upon his system within.

The parenchymatous structure of the liver being possessed of scarcely any sensibility may be be attacked by an inflammation sufficiently powerful to destroy its substance, without announcing by sign or token the approach of an enemy that will rid it of existance; save that of a deep, slight, obtuse pain. Many instances have been seen after death of suppurated liver, which during life no indication was ever given of it. The pain is generally acute and violent when the lively surface of the gland is encroached on by inflammation, producing a very disagreeable cough and feeling of tightness about the thorax, from the approximation of the convex surface to the diaphragm and lungs.

"Both ancient and modern nosologists have made a distinction between the symptoms that occur

when the inflammation occupies the convex surface of the liver, and those that are present when the disease affects the concave. It is said, when great difficulty of breathing and cough accompany the pain in the region of the liver, that these symptoms indicate the inflammation to be seated in the superior or convex part; but when the inflammation occupies the concave or inferior surface, which lies contiguous to the stomach and duodenum, there is more sickness and vomiting; and moreover, the pain is not so violent in the region of the organ as in the other instance. In the other species of the disease, called chronic, there is decay of flesh, loss of appetite, dullness, despondency, general laxity or weakness of the system, complexion of a deadened or morbid hue, acidity, stomachic pains and indigestion; attended with headach and giddiness; flatulency, costiveness, and clay coloured stools, for the want of a proper bilious secretion. The urine, which is light coloured and deposites a red sediment, bears the resemblance of mucus, mixed with water; in the region of the

liver there is a sense of weight and enlargement, with an obtuse pain, and some slight difficulty of breathing and soreness; a yellow tinge of the eyes and skin, the pulse full, slow and sometimes intermitting; the mind becomes possessed of gloomy and melancholy feelings, doubting, jealous and distrustful; the patient seems to be forsaken by hope filled with humility, yet nevertheless proud, silent, reserved, and fearful of success in any of his own undertakings, and hating it in others.

In order to distinguish one disease from another, we must examine the different symptoms, each, particularly and minutely; and those symptoms ~~of~~ ~~xxxxx~~ ~~xxxxx~~, which we find most frequently attendant on a disease unlike the symptoms of another disease, are the constituted signs by which we point out the difference. In very many diseases we discern occurrences which never fail to appear as symptoms of their particular disorders, these are called pathognomic signs, which ought always to be borne in mind, and well understood by the practitioner; for which pur-

purpose much studious attention and observation is ne-
-cessarily required.

Hepatitis, may without difficulty be distinguished from pneumonia by observing, that the pain in the former complaint reaches to the shoulder, countenance sallow together with a yellow suffusion in the eyes; expectoration not succeeding to the cough, which is dry, the tightness about the chest and laborious breathing being much less: from Gastritis, by the capability of the stomach to retain medicins and food without bring-
-ing on immediate rejection, heat and pain likewise not being increased by them. the strength and muscular power also much greater. an erect and easy state of the body, calm stomach, steady pain, the pulse full and quick; may serve to distinguish it from a spasm of the gall ducts; in which case and a relief from pain is obtained by a posture of the body forward upon the knees.

This, like other inflammations may have its ter-
-minations in resolution, suppuration, gangrene, and

in a hardening and enlargement of the liver called a Scirrhus, (that being its termination of most frequent occurrence in this Country;) suppuration not being so liable to be brought on here as in warmer climates, gangrene, ~~[illegible]~~ also it is said, is seldom a termination of this inflammation in any climate. Hydatids occasionally are found to be formed in the liver, and a case is related in which sixteen pints of Water was drawn from one of these bodies, through a Canula. Much care and experience in requisite in forming a Correct prognosis of the disease we may chance to have under our direction, and the young physician should be extremely mindful that his reputation often is put in hazard by an incorrect decision as to its final termination; and ignorance will Certainly be said to be his portion, if in a disease of ordinary occurrence he is found to be mistaken.

Those symptoms by which we may be led to believe that a favourable termination of Hepatitis will take place may be said to be the following.—

A gradual abatement of the pyrexial symptoms, an improvement of the Complexion, their strength not much reduced by the remedies, return of appetite, and some little increase in the bulk of the body. But intensity of pain in the region of the liver, a full, frequent pulse, great heat, thirst, dry skin, costiveness and rigors, warn us of approaching suppuration. — Which may be known by frequent shivering, a sense of weight in the part, pain less acute, but more throbbing in the tumour, whiteness of tongue with some flushings of Countenance; and the abscess when formed, from its contiguity to various parts is the cause frequently of dangerous and violent disease; for the matter, by insinuating itself into the cavity of the thorax, may beget a purulent ~~exxxx exxxx~~ empyema.

On dissection we are presented with the liver much changed in Colour and dimentions, often of a deep unnatural purple hue, and occasionally in drunkards, of a white and grayish appearance;

Tis oftentimes found greatly enlarged, indurated and hard to the touch; frequently abcesses are found, adhesions to the adjoining parts also take place; Tubercles Hydatids and Billiary calculi are met with, — and its membranes are also found affected with inflammation.
In the treatment, the indications clearly are ~~seen~~ to subdue the violence of the inflammatory symptoms when present, and to reinstate the liver in the proper exercise of its healthy functions. If the symptoms of chronic Hepatitis should appear, they are to be met by such remidies as will cause a descussion of the tumour that may exist, or, if suppuration have commenced, to quicken the termination of the process, and next proceed to evacuate the matter.
In the first place if the Physician be called during the inflamanatory stage, his chief reliance should be placed upon plentiful depletion by the lancet; and proper discharges from the alimentary canal. Perform venesection often and to a full amount —, always directed by the violence of the

of the disease and the strength of the patient) from a large orifice, rather than a small one; on the ground that the system will become greatly weakened by the continued evacuation of the blood, without the local inflammation being disturbed in its advance. so long as the pulse continues hard, full and obstructed, difficult breathing, the blood after being drawn exhibiting a buff appearance when cold, and the acute pain still clinging to the side, we should perform the operation of blood letting. Indeed it is a remedy of such sovereign efficacy, that it should be copiously and promptly used and implicitly relyed upon. But frequently the disease exists without any marked symptom or positive token to warn us of the danger, or to indicate to us its inflammatory tendency, so that suppuration will have taken place, before the depleting process has been thought to be required. The secondary symptoms as diarrhoea dry cough, pain in the shoulder and great tenderness of the organ on being pressed

a little hard appear; pointing out the nature of the complaint.

After venesection has been plentifully used, we should not fail to turn our attention to the intestinal tube. Administer calomel combined with jalap or some other purgative of the sort, every day until the disease clearly abates, or runs on to suppuration. Local bleeding with leaches attached to the part affected, or with a scarificator and cupping glasses, may be also be deemed of great and undoubted efficacy, as it extracts the blood ~~[illegible]~~ immediately from the inflamed vessels.

But when the disease seems obstinate, notwithstanding the full exercise of the means here recommended, we would apply a large blister plaster to the side, the sore made by which may be continued open by repeated application of them, or by some stimulating ointment. In the course of the disease much benefit will arise, as in other inflammations, by exciting a gentle diaphoresis; which by ~~[illegible]~~

determining the blood to the surface of the body, it "will lessen or remove internal congestion, obviate constriction of the extreme vessels, and diminish action, by reducing the quantity of the circu-lating fluid." To promote the cutaneous discharge nauseating doses of Tartarized antimony may be given with very happy and efficient effect — prescribed in doses of $\frac{1}{6}$ of a grain, together with 10 grains of nitrate of potash and an ounce and a half of the saline draught; a plentiful use of mild diluent liquors will likewise be serviceable. When the pain is very severe in the region of the liver, and the skin dry and hot, the warm bath may be resorted to. The antiphlogistic plan of ~~that~~ treatment should be faithfully adhered to, and obstinately followed; animal food of every sort should be shunned, and fat, greasy broths avoided, diet of the plainest and least nutritive quality, such as that of a farinaceous and gruel nature may be administered to the patient without danger, ~~Whereas~~ that which is gross, and difficult to be digested would be highly injurious and prejudicial; Cooling drinks

mixed with some vegetable, or other acid, will add greatly to the good and comfort of the diseased, besides acting some what as a febrifuge.

The march of the disease will sometimes not be checked by the means just advocated and advised, all the fair hopes which we may have formed with regard to their efficacy in the cure, will be over thrown by the raging violence of the disorder. When we find our efforts to be thus unavailing and unsuccessful we are forced, however unwillingly (for our patients good) to have recourse to another plan of management, using the medicine heretofore applied to cleanse the bowels, so as to produce a mercurial action within the system, Mercury when taken to cause a slight affection of the mouth or gentle salivation, in this stage of the disease will be found almost surely to produce a cure. Calomel, in this, as in many other serious affections, may be considered a remedy of infallible success, and certain and undoubted efficacy. Order it to be rubbed in a state of ointment over the region of the part diseased, every night to the amount of a

drachm, or there about, until the mouth begins to be a little sore, If any disadvantage or inconvenience, or a want of proper success should arise from its use thus recommended; twill be as well, to apply the unction to the groins and there continue it till salivation is the consequence; Calomel may be given at the same time internally, conjoined with opium or antimony, in the form of a pill, acting as an auxiliary to the friction used, in bringing about its effect sooner than otherwise. No stinted or scanty use of Mercury can be allowed, no fears with regard to a salivation must be held, as no injury can arise from it, only as subsequent to some unwarrantable exposure; but an infinitude of good will brin almost every case the unavoidable end of its sufficient and plentiful application to a Constitution, so much enfeebled and diseased as the one affected with Hepatitis. Use it with Courage and determination, tempered with discretion, and guarded with a thorough Knowledge of the medicine.

Recollect then, that in Confirmed Hepatitis this

medicine must be used to its uttermost, and perseveringly continued to begin; as any other mode of treatment will be found feeble, unserviable, and dangerous in the extreme; creating delay on the part of the curative operations, and adding energy and strength to the advancing foe. A discussion and resolution of the hardness and swelling will be a necessary consequence of the proper operation of the Mercury thus administered. And thus it appears that by a plentiful depletion by venesection, copious discharges from the intestines by mercurial purges, local blood letting, blistering, the ministration of gentle, but effective diaphoretics; and a mercurial course managed with some little caution and circumspection, and a strict attention to the antiphlogistic measures; we may oftener than otherwise over reach this most dangerous and inveterate disease. Yet cases occur where it is led on imperceptibly to suppuration by its violence and inveteracy, the remedies made use of not being sufficiently powerful or too sparingly and timidly ministered to the sick, to be of necessary and desired influence on

the obstinate disease.

When suppuration has taken place, we should change our antiphlogistic plan of regimen, to one more nutritious and stimulating tendency; ~~our~~ depleting remedies should be abandoned. for more invigorating and strengthing ones, in order that the process may be carried on quickly and with ease, and to cause the abscess to determine outwards. That the salutary intentions may be effected, we should administer a generous nutritive diet, — The Cinchona bark to the amount of a drachm or a drachm and a half combined with a moderate quantity of wine daily, and so continued till suppuration is fully completed. Fomentations and poultices applied externally ~~over~~ over the abscess that it may be induced to point outwardly, being rendered less fatally dangerous, than when discharging itself internally.

The process of suppuration being entirely and perfectly completed, either, naturally, or by the aid of such a plan of management as here detailed, which if

steadily pursued will hardly fail to accomplish the desired end; and an evident fluctuation and softness of the tumour existing, we should at the most dependent part carefully lay it open. divide the integuments with the scalpel until you reach the abscess. then, as it seems fit to the operator, plunge the lancet or Trocar into it. place the ~~part~~ patient in the most favourable situation possible for the evacuation of the matter. compress the belly by means of a bandage, and suffer the contents of it to be gradually drained off. As heretofore advised, the Cinchona bark, wine, some stomachic elixir, and a nutritious diet should be prescribed throughout the whole course of the cure.

Should we be consulted by a patient labouring under Chronic Hepatitis, either as succeeding to an ill cured acute Hepatitis, or being discovered without any apparent symptoms of former disease upon the constitution, our chief reliance ought to be placed on mercury and nitric acid, administered as an auxiliary remedy will be found of much utility.

Introducing the mercury into the system gradually and cautiously, when the symptoms are mild, so as to bring about a salivation, but when the symptoms are very violent and urgent, be intrepid and fearless, and dash it into the system by every means in our power.

Whilst thus endeavouring to insinuate the medicine into the Circulation: the pains being acute and the febrile action severe, in order to mitigate which we must have recourse to venesection, blisters applied over the injured part, a gentle moisture brought over the body by means of flannel next the skin; pediluvia, and warm diaphoretick drinks: friction with the hand or by application of the flesh brush over the region of the liver, will be of very essential service. Be mindful to keep up the peristaltic motion of the intestines causing a regular alvine evacuation: to effect which, give at bed time occasionally a dose of the submuriate of mercury mixed with a proper quantity of Jalap or Colocynth, succeeded on the following.

morning by some neutral salt.

In those cases where mercury cannot be used (such as in those of a scrophulous habit or of a scorbutic tendency; or where it has been unsuccessfully given, without detriment or prejudice to the affected person;) nitric acid may be resorted to with considerable advantage, and frequently with an assurance of success which never could be obtained by a mercurial course. Its mode of action being very much alike to that of mercury, it may be given where mercury is indicated with almost equal expectation of effect: it will resolve tumors and diseased indurations with almost equal facility, and by the same sort of operation that mercury does. Being very diffusible in its operation, it imparts vigor to all the functions of the body: particularly in those cases in which there is too much debility to justify the use of mercury. Commence with small doses and gradually increase them to the quantity of from one drachm to two in twenty four hours. Direct one ounce to be diluted with eight ounces of water, sweetened with a little syrup.

Thus prescribed, its effect is as great, as it is extraordinary and surprising in the rapidity and celerity with which it performs its purposes. When the mercury has been unavailing we may frequently administer this medicine with unexampled utility; acting as a renovator and reinstator of a broken down constitution.

The liver in "Chronic hepatitis may be affected by scirrhus, by an abscess, by tubercular ulcerations or placed in a variety of other states hitherto not accurately defined, and which cannot be satisfactorily discriminated by any set of symptoms: as pretty nearly the same treatment is to be pursued under all circumstances, its not a matter of very great importance, accurately to point out their various differences.

Follow then what is here laid down implicitly and confide with a certainty of success in the measures advised. We have said ~~together~~ to you, give the mercury in its chronic stage as your chief remedy, your sword and shield of attack and defence: and prescribe

the nitric acid as an auxiliary corps of reserve, to be used when the other is found to lack in efficacy, and unless in very extreme and extraordinary cases of the disease, our endeavours will be crowned with complete and desired good fortune, where our plan has been faithfully executed. As prompt and useful allies, conjoin and associate with these remedies, bloodletting, by means of venesection: and a thorough and clean evacuation of the intestinal canal of the noxious matter contained there in, by the aid of gentle, but effectual purgatives. Encourage a gentle diaphoresis and moisture over the body, by the ministration of mild diaphoretics, and the pleasant application of flannel to the skin. Dispel the fears and gloom of your patient, have him conveyed if possible to some watering place of a chalybeate nature: that by a change of scene and ideas, hope may revive and be of aid in your curative plan. But when we find all our endeavours useless & unavailing, and that the disease, with quick steps, is marching on to the dissolution of our patient: then quick,

calm and sooth his distress, offer him the holy balm of comfort and of hope — while there is life, life may be continued and at last, though reluctantly, leave him to the fostering care ~~and~~ of nature and his God —